## REMARKS

Claims 1, 2, 4-6, 8-13, 15-21, 23 and 24 remain in the application. Independent claims 1, 8, 18 and 23 have been amended to include the limitations of the first width of at least one signal trace being located in a signal trace anti-pad region that extends from the center of the via to slightly past the edge of an anti-pad region. Support for this amendment may be found at page 8, lines 11-13, for example. Claim 3 has been cancelled and claim 10 has been amended for clarity. No new subject matter has been added with these amendments.

A. 35 U.S.C. § 103(a)

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Zhu -Claims 1,2, 4-6, 8-11, 13, 15, 17, 23 and 24

Claims 1,2, 4-6, 8-11, 13, 15, 17, 23 and 24 stand rejected (claim 3 having been canceled) under 35 U.S.C. § 103(a) as being unpatentable over the U.S. patent No. 6, 856,210 issued to Zhu et. al. (hereinafter "Zhu")(Office Action, page 2). The Office contends that it would have been obvious to lower the impedance discontinuity from 5 ohms to 1 ohms in order to use the circuit in a high frequency microwave band (Office Action at page 2). However, even

discontinuity from 5 ohms to 1 ohms in order to use the circuit in a high frequency microwave band, "to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." In *re Royka*, 490 F.2d 981,180 USPQ 580 (CCPA 1974).

With respect to independent claims 1, 8, 18 and 23, these claims have been amended to contains the limitation of the first width of at least one signal trace being located in a signal trace anti-pad region that extends from the center of the via to slightly past the edge of an anti-pad region. Zhu does not teach or even suggest the limitations of the first width extending past the edge of the anti-pad region. The Office refers to FIG. 1 for an example of the first width extending past the edge of the anti-pad region, however, FIG. 1 does not include a description of a signal trace comprising a first width that is wider than a second width.

In addition, Zhu appears to teach away from amended claims 1, 8, 18 and 23 since FIG. 7 (which the Office suggests discloses a first width wider than a second width) discloses the first width not extending past the edge of the anti-pad region. Zhu in fact discloses the first width shorter in length than the anti-pad region (503) (see FIG. 7 and col. 5, lines 19-21 of Zhu). Because the dependent claims 2, 4-6, 9-11,13, 15, 17 and 24 (which depend from independent claims 1, 8, 18 and 23) are allowable for at least the reason as depending from allowable base claims, Applicants are not addressing further the rejections of the dependent claims at this time. Therefore, claims 1,2, 4-6, 8-11, 13, 15, 17, 23 and 24 are not rendered obvious under Zhu.

Zhu in view of Arabi-Claims 16, 18, 19 and 21

Claims 16, 18, 19 and 21stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhu in view of the U.S. patent No. 6,501,278 issued to Arabi et. al. (hereinafter

"Arabi")(Office Action, page 4). The Office contends that it would have been obvious to have a TDR probing system where the ground pad is grounded as taught by Arabi (Office Action at page 5). However, "to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." In *re Royka*, 490 F.2d 981,180 USPQ 580 (CCPA 1974).

With respect to independent claims 8 and 18, these claims have been as described above. Zhu, either alone or in combination with Arabi does not teach or even suggest the limitations of amended claims 8 and 18, from which claims 16, 19 and 21 depend. Because the dependent claims 16, 19 and 21 are allowable for at least the reason as depending from allowable base claims, Applicants are not addressing further the rejections of the dependent claims at this time. Therefore, claims 16, 18, 19 and 21 are not rendered obvious under Zhu in view of Arabi.

Zhu in view of Arabi and further in view of Pon-Claims 12 and 20

Claims 12 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhu in view of the Arabi and further in view of U.S. patent No. 4,517,535 issued to Pon et. al. (hereinafter "Pon")(Office Action, page 6). The Office contends that it would have been obvious to use a SMA to connect high frequency signals from a signal line device to a circuit board trace. (Office Action at page 6). However, "to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." In *re Royka*, 490 F.2d 981,180 USPQ 580 (CCPA 1974).

With respect to independent claims 8 and 18, these claims have been amended as described above. Zhu, either alone or in combination with Arabi and Pon, does not teach or even suggest the limitations of the amended claims 8 and 18, from which claims 12 and 20 depend.

Therefore, claims 12 and 20 are not rendered obvious under Zhu in view of Arabi and further in view of Pon.

In view of the foregoing remarks, the Applicants request allowance of the application.

Please forward further communications to the address of record.

Respectfully submitted,

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